ALLERGY: PRACTICAL EXPERIENCE VERSUS THEORY †

By ALFRED C. REED, M. D., *San Francisco*

I. INTRODUCTION

I HAVE no new material and no statistics to present and it is not my intention to discuss contradictions between theory and practice in the field of allergy nor in the slightest degree to criticize the remarkable clinical results achieved by special workers in allergy. Their accomplishments constitute a recent and important chapter of advance in medical practice in which we all share advantage, and for which we are all grateful. It is my purpose in a rather imperfect way to make an attempt at orientation in the complex maze of allergic fact and fancy in which the practicing physician finds himself today. The attempt must be imperfect because even yet our knowledge is fragmentary and we can hardly begin to look behind the huge mass of data to the controlling laws of allergy which are doubtless much more intimately related to vital processes than we have thus far suspected.

II. CLASSIFICATION OF ALLERGIC PHENOMENA

Classification of allergic phenomena can well follow Hanzlik's description ("The Basis of Allergic Phenomena," Jour. Amer. Med. Assn., June 21, 1924) of allergy as the manifestations of altered physicochemical relations in the blood and tissues. Hanzlik divides allergic manifestations into two types. The first of these is anaphylactic. This is characterized by a certain sequence of events: (1) introduction parenterally or otherwise into the system of native or complex proteids; (2) a period of incubation in which hypersensitivity develops; (3) reintroduction of the same proteid is then followed by anaphylactic shock. This shock is shown by a variety of symptoms, such as fever, rashes, edema, joint pains, leukopenia, swollen lymph glands, etc.; (4) this anaphylactic shock can be transmitted by transfusion to insensitized animals, though in a milder degree; (5) increased excitability can be demonstrated in excised involuntary muscles of various organs; (6) histologic tissues changes and physicochemical blood and lymph changes are found; and (7) desensitization can be produced by treatment with the same and different proteins and a large number of other agents.

The second class of allergic phenomena includes idiosyncrasies, protein and nonprotein responses, colloid, irritative, and other reactions, etc. He describes the manifestations as follows: (1) anaphylactoid phenomena can be produced by a large variety of unrelated agents, native or complex proteins not being necessary; (2) anaphylactoid phenomena do not have an incubation period or preliminary sensitizing introduction; (3) the symptomatology is very similar to that of anaphylactic reactions; (4) apparently this hypersensitiveness can not be transferred by transfusion; (5) increased excitability of involuntary muscle has not been demonstrated directly for most of this class of sensitizing agents. (Hanzlik notes certain exceptions); (6) histologic and physicochemical changes in blood and tissues are even more striking than with anaphylactic reactions; (7) desensitization can be produced by a considerable variety of agents, having no necessary chemical relation to the sensitizing agent.

Hanzlik reduces the basis of these two classes of allergic reactions to a common denominator, consisting of a disturbance in the physical and chemical mechanisms of the blood such that functional stimulation or depression of cells results in alteration of physiologic functions.

With such a clear-cut theoretical classification of allergic manifestations, we are ready to consider clinical pictures in the patient which are not fully explained by our current clinical practice.

III. CLINICAL PHENOMENA IN THE LIGHT OF ALLERGIC THEORY

(1) The multiplicity of clinical evidences of allergy brings with it the necessity of correlating all such manifestations in each patient and of studying in large groups of patients the incidence of the different allergic symptoms in association with each other and especially with other pathologic changes, types of heredity, varieties of endocrine status, and nervous as well as psychologic environment. Increasing experience with patients in general leads to the conviction that whenever allergic evidences are present, all of these factors must be carefully studied in detail to substantiate a diagnosis. Diagnostic rules in turn can only follow collection of such information on a large scale. At present we sadly lack such information. It should be one of the first duties of allergy clinics to develop such studies. Allergic manifestations in all systems of the body should be studied after this fashion. The skin, gastrointestinal tract, eye, blood, endocrine organs, circulation, and nervous system, at least, ought to be searched and studied, as well as the respiratory tract. Proper intensive study along these lines might well give information of equal or greater value than the comparatively superficial tabulations we now deal with, of thousands of patients sensitized to thousands of more or less specific substances.

(2) It is impossible to believe that all or most allergic manifestations are specific for a definite antigenic substance alone. Our theoretical classification does not make it necessary and our clinical experience contradicts it. We see group sensitizations and spreading sensitizations and, finally, we see patients who react either with a skin test or by systematic phenomena to almost all proteins and even nonprotein irritants. If allergic symptoms were always due to specific substances which in turn gave specific skin reactions, our diagnostic study could safely be limited to such skin tests alone.

(3) It is impossible to believe that all allergic phenomena are produced by proteins. Simple chemical agents, colloids, metals, arsphenamin, coal-tar derivatives, and on through a long list, may react characteristically as well as proteins.

(4) From the clinical point of view it is evident that we need much more information as to the nature of food and drug idiosyncrasies. It is possible that studies directed here might be more fruitful of

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understanding of the pathology of allergy than the piling up of evidence on skin reactions in relation to asthma.

(5) We see a decidedly familial and hereditary relationship in a majority of allergic patients. While much has been written on this point, most of our data is too narrow and unqualified to be of service. There is concealed here a key which also may unlock some of the now hidden laws of allergy. Again, careful, intensive study is needed, and is remarkably rare. It is my belief that this aspect of the problem of allergy is one of the most important and that its solution will reveal the fundamental secret of allergy to be a function of the nervous system, whereas the evident pathology lies in the tissue cells.

(6) As has been intimated, we do not know the underlying pathology of allergy and this deficiency cripples us especially in dealing with a class of allergic patients free of constant special sensitizations, but whose autonomic nervous system is obviously at fault. These individuals drift along on empyric therapies and often develop frank major allergic phenomena. Too little emphasis, in this connection, has been placed on the rôle of suggestion, hysteria, psychic repressions and conflicts, and reflex habit in the production of serious allergic symptoms. Correspondingly, entirely too little use has been made of these factors in treatment, especially in the case of intractable asthmas.

(7) Observation of only a few allergic patients is sufficient to demonstrate how little we know of the selective qualities of allergic responses. (Why does a patient have asthma, instead of mucous colitis or hives?) This fact, too, indicates an underlying and at present unknown essential pathology. It also demonstrates that we have vastly more to learn of the operation of the immediately exciting causes of allergic reactions.

(8) The endocrine relations of allergy have been referred to repeatedly, but no comprehensive studies are known to me which have sought to elucidate experimentally the mutual influences of the endocrine organs and allergic states. Yet we see rather frequently patients in which endocrine disturbance has an undoubted relation to asthma and other allergic phenomena.

In concluding this section, allow me to say that I have selected eight clinical problems which we all see illustrated repeatedly in our patients, and whose solution is fully as important as the further accumulation of data from routine skin tests. No doubt other such problems will occur to each reader.

IV. CERTAIN PRACTICAL OBSERVATIONS DRAWN FROM A SURVEY OF THE PRESENT STATUS OF ALLERGY

(1) I am impressed with the high percentage of asthma patients in whom routine skin tests are usually negative, who secure relief by attention to paranasal sinus infections. This is a point which ordinarily receives inadequate attention. An unusually thorough investigation of these sinuses should be made in every case of asthma and allergic rhinitis. Contact points must be relieved. Contacts may cause asthma as a result of direct irritation, by producing local changes in the mucosa and by interfering with free sinus drainage. A focal infection fully drained ceases to be a focal infection.

Many times we see asthmatic patients whose noses are pronounced free of significant pathology by competent specialists. Yet ethmoid infection is present and its treatment results in cure of the asthma. Vaccines are usually of great assistance, either routine autogenous, or by Solis-Cohen's method, where swabs are wiped in sterile test tubes, several cubic centimeters of the patient's blood are added, and a vaccine is prepared from the dominant growing organism. Dr. H. Y. McNaught has called special attention to the importance of cryptic ethmoid infections in this connection. We have a considerable series of patients where treatment along these lines has resulted in relief and cure. Some of these patients give positive skin tests to foods or epidermal or miscellaneous antigens, but treatment in line of the skin tests gives no relief.

(2) While it is true that climate may influence asthmas chiefly in a secondary way, by its relation to bacterial respiratory infections, or to dusts and pollens, nevertheless we should not be too hasty in dismissing other effects of barometric pressure, humidity, temperature, sunlight, and winds. Little accurate information is to be had on these points (even the influence of varying partial pressures in asthma being virtually unknown).

(3) We need to know more about the influence on allergic states, especially asthma, of such things as anesthesia, biliary jaundice, protozoal infections, and specific disease such as malaria and septic infections.

(4) We need particularly to remember that allergic phenomena are remarkably long-lived, and while easily influenced by numerous therapeutic procedures, tend to recur and relapse. It is a matter of common observation in special clinics as well as in private practice, that our patients have usually been treated already by a varying number of methods with varying degrees and durations of success. In asthma especially is this true. This point is emphasized in the second place by the numerous agents and methods recommended in medical practice for treatment of asthma, and in the third place is distinguished by the weird variety of patent medicines and nostrums advertised for its relief. Such a condition does not obtain in malaria or other diseases where we have specific remedies. These considerations illustrate the necessity of getting what Dr. Charles Miner Cooper calls a longitudinal section of the patient. Sir James McKenzie followed heart cases twenty-five years to reach valid conclusions. A similar method in asthma would save much space in periodicals and would greatly enhance our actual evaluation of treatment. We need records of immediate data, but we sorely need more complete histories of later progress. The same consideration has been forced on us in the case of such diseases as syphilis and amebiasis.

(5) We all recognize the great contribution to our knowledge made by the comparative standardization of skin antigen reactions. We have welcomed, too, improved methods of manufacture and efforts by many workers, to secure the exact type and quality of antigens which may be at fault in a given patient in a given locality. This detail is valuable

and important. We must not, however, forget that the method of antigenic skin tests has merely opened a gate through which we can proceed to a closer study of this huge subject.

(6) In asthma, especially, because of its chronic and relapsing nature, patients naturally grasp at every straw and seek any method, no matter how absurd or useless, that promises relief. We have to remember the profound psychologic influences often so easily brought to bear on asthmatics. Optimism and encouragement are easily engendered with the suggested hope of cure. Such factors, added to a substratum of empyrical therapeutics and utilization of what really scientific knowledge of allergy is available, leads the practicing physician face to face with two serious dangers. These dangers we see exemplified in the daily press on the one hand, and in medical literature on the other. The first danger, to which true physicians are not prone, is that of unmitigated commercialized quackery. This is flagrantly illustrated in various advertising institutions and individuals. The second danger is that of more or less unconscious exploitation of patients on the same premises as above, accompanied by an overly optimistic judgment of results obtained. We must guard against these easy tendencies, endeavor to maintain an impersonal and judicial attitude toward the facts, and realize the urgent need of greatly broadening our allergic horizon.

V. CONCLUSION

While the absolute or underlying essential pathology of allergy is unknown, we have now definite lines of approach to an understanding of it. One of these is the use of skin antigenic reactions. We have reviewed some of the outstanding problems of allergy in clinical work and have recorded a few observations on the present status of allergy in medical practice. It is essential to broaden our observation and research. W. L. Brown has recently (Brit. Med. Jour., Aug. 29, 1925) given a summary of the treatment of asthma which we might well extend to the treatment of allergic states in general. Brown summarizes the treatment as follows: Study the psychic features of the patient; remove peripheral sources of irritation, especially in the upper respiratory tract; develop respiratory intake by chest exercises; desensitize (or immunize) when possible; restore balance in favor of the sympathetic system; attend to the general hygiene. These are the best treatment rules I have seen.

Keeping up on current literature, either medical or general, is a physical impossibility; and those who make the attempt will spend every spare moment at it and will still miss much that is good. He will also miss much that is different, and much that is bad. His bereavement is not without a silver lining. When it is once realized that keeping up on current literature is an impossibility, the thought at once occurs, "Why not miss a little bit more current stuff and have time to enjoy a few things which have been proved to be classics." This is the only way out of a bad situation. Reading time to be most effective must be budgeted, and the budget should make ample provision for a careful reading of the classics—at least those which prove most interesting. To miss any good current material is lamentable to be sure; but to miss all the gems of past ages is a tragedy.—Bull. Wayne County Med. Soc.

THE NEURASTHENIC PATIENT

By Oscar F. Johnson *

If we look, look long and thoroughly, we will find that our neurasthenic patients are sick. I believe that there is a physical basis for most patients' complaints, and when we say that a patient is a neurasthenic, it is a refined way of confessing our ignorance.

I believe that true neurasthenia is one of the rarest of diseases. When we examine a patient who suggests neurasthenia, in all probability there is a physical cause for his condition.

Discussion *by Julian Mast Wolfsohn, San Francisco; R. A. Cushman, Santa Ana; Edward D. Kremers, Pasadena.*

WITH our present knowledge of disease we may say that all human ills may be divided into three groups: To the first group belong those that have a known biological basis, such as typhoid, tuberculosis, malaria, etc. To the second group belong diseases which have a well-known histopathological basis, but whose etiology is generally unknown, such as cancer, arteriosclerosis, nephritis, etc. To the third group belong diseases which up to the present have no demonstrable pathology, such as neurasthenia, hysteria, and the various psychic disturbances. These groups are gradually and steadily changing for the reason that our diagnostic armamentarium is becoming more and more a means of precision and accuracy.

Let us for a moment analyze the neurasthenic patient; let us come to a comprehensive understanding of his textbook characteristics; and then let us draw conclusions. We are told by such men as Dercum and Beard, "in neurasthenia we find an individual who has lost a large part of his stamina." He is one who often has an imaginary ailment for which there can be found no local biological explanation. This is called irritable weakness. Neurasthenia is said to be present among people who have exhausted their reserve, and who believe they have malfunctions of certain organs or tissues. The neurasthenic is typically one who is introspective, one who thinks about his ailments to an abnormal degree, and whose life and actions are colored and made sordid by these so-called imaginary ailments. We find neurasthenia among women who, because of excessive and laborious work, use up their reserve strength, who in due course of time develop headaches, backaches, numbness, and all manner of obscure symptoms, such as tingling, heat, cold, tightness, etc. And so using the information given by the older writers we have a vast group of symptoms. These older writers were specialists, their capacity for detail made them geniuses in their respective fields. Their patients had been selected, and reselected from among a large group of patients. The typical and genuinely neurasthenic patient is hard to find, and if he is a true neurasthenic, according to the older authors, there is no physical basis for his complaint.

But are we competent to judge when a patient is a neurasthenic? We have gone entirely too far and have been unjust to too many patients who were really and fundamentally ill. Neurasthenia has be-

* **Oscar Frederic Johnson** (510 Physicians' Building, 1027 Tenth Street, Sacramento). M. D. Stanford University, 1919. Practice: General (Internal Medicine). Hospital connections: Sutter Hospital. Appointments: California State Board of Health, Malaria Control, Shasta County, 1919.